



IEEE MTT/AP Orlando Chapter & Raj Mittra Distinguished Lecture Program

“Current Research and Development of Wireless Power Transfer via Radio Waves and the Application”

DATE/TIME: Wednesday, August 29, 2018 (4:00 PM-5:00 PM)

SPEAKER: Dr. Naoki Shinohara

Professor, Research Institute for Sustainable Humanosphere (RISH), Kyoto University, Japan

ABSTRACT:

Theory, technologies, applications, and current R&D status of the wireless power transfer (WPT) will be presented. The talk will cover both the far-field WPT via radio waves, especially beam-type and ubiquitous-type WPT, and energy harvesting from broadcasting waves. The research of the WPT was started from the far-field WPT via radio waves, in particular the microwaves in 1960s. In recent years this became a hot topic again due to the rapid growth of wireless devices. Theory and technologies of antenna and circuits will be presented in case of beam-type and ubiquitous-type WPT. The industrial applications and current R&D status of the WPT via radio waves will be also presented.

Key words:

Wireless Power Transfer, Microwave Power Transmission, Energy Harvesting, Rectenna, Phased Array.

BIOGRAPHY:



Naoki Shinohara received the B.E. degree in electronic engineering, the M.E. and Ph.D (Eng.) degrees in electrical engineering from Kyoto University, Japan, in 1991, 1993 and 1996, respectively. He was a research associate in the Radio Atmospheric Science Center, Kyoto University from 1996. He was a research associate of the Radio Science Center for Space and Atmosphere, Kyoto University by recognizing the Radio Atmospheric Science Center from 2000, and there he was an associate professor since 2001. he was an associate professor in Research Institute for Sustainable Humanosphere, Kyoto University by recognizing the Radio Science Center for Space and

Atmosphere since 2004. From 2010, he has been a professor in Research Institute for Sustainable Humanosphere, Kyoto University. He has been engaged in research on Solar Power Station/Satellite and Microwave Power Transmission system. He is IEEE MTT-S Technical Committee 26 (Wireless Power Transfer and Conversion) chair, IEEE MTT-S Kansai Chapter TPC member, IEEE Wireless Power Transfer Conference advisory committee member, URSI Commission D vice chair, international journal of Wireless Power Transfer (Cambridge Press) executive editor, technical committee member and 1st chair of IEICE Wireless Power Transfer, Japan Society of Electromagnetic Wave Energy Applications president, Space Solar Power Systems Society board member, Wireless Power Transfer Consortium for Practical Applications (WiPoT) chair, and Wireless Power Management Consortium (WPMc) chair.

LOCATION: University of Central Florida
HEC-450

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The lecture is co-sponsored by The IEEE/AP/MTT Lecture series and by Raj Mittra Distinguished Lecture Program of the College of Engineering and Computer Science at UCF.